UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

October 27, 1998

Mr. James M. Seif, Chairman
Environmental Quality Board
P.O. Box 8477
Harrisburg, Pennsylvania 17105-8477

Dear Mr. Seif:

The purpose of this letter is to submit comments by the U. S. Environmental Protection Agency Region III's (Region III or EPA) regarding our initial review of the proposed amendments to water quality regulations set forth in 25 Pa. Code Chapters 92, 93, 95, and 97, and the addition of Chapter 96. This proposed rulemaking was public noticed in the *Pennsylvania Bulletin* on August 29, 1998. EPA understands that this proposal is part of the Commonwealth's Regulatory Basics Initiative (RBI), which is a process to evaluate regulations considering several factors including whether requirements: are more stringent than Federal regulations without good reason; impose economic costs disproportionate to the environmental benefit; are prescriptive rather than performance-based; inhibit green technology and pollution prevention strategies; are obsolete or redundant; lack clarity; or are written in a way that causes significant noncompliance. EPA's comments are included as Enclosure 1 to this letter.

While all the proposed regulations in this package regard changes to Pennsylvania's water program, the proposal amends two distinct categories of regulations that are reviewed in somewhat different ways by EPA. The first set of regulations contained in 25 Pa Code Chapters 92, 95 and 97 constitute Pennsylvania's National Pollution Discharge Elimination System (NPDES) program regulations. The second set contained at present in Chapters 16, 93 and a portion of 95 comprise Pennsylvania's water quality standards. The proposed Chapter 96 contains some water quality standard regulations and some NPDES permitting regulations and will be reviewed accordingly.

The proposed regulations in Chapters 92, 95, portions of Chapter 96 and 97, if adopted as final regulations, would modify Pennsylvania's current NPDES permit program. EPA will consider those changes as a substantial modification of Pennsylvania's authorized program to administer the NPDES permit program in Pennsylvania under Section 402 of the Clean Water Act (CWA). As you know, pursuant to Section VI.B. of the 1991 NPDES EPA-Pennsylvania Memorandum of Agreement and 40 CFR 123.62(b), no revision to the NPDES program becomes effective until approved by the Administrator. Procedurally, once Pennsylvania adopts the modification(s) as final regulations and submits a modified program description, Attorney General's statement (or Regulatory Counsel), and other necessary documents to EPA, EPA will

seek additional public comment on that NPDES program revision pursuant to 40 CFR 123.62(b)(2). Based on EPA's review of Pennsylvania's submission, any public comments, and the requirements of the CWA, EPA would then approve or disapprove the NPDES program revisions. Only once EPA approves any NPDES program modifications, do those approved regulations become effective.

The proposed changes to Chapter 93 and portions of Chapter 95 and 96, if adopted as final regulations, will constitute revisions to Pennsylvania's water quality standards. Once Pennsylvania adopts and submits those final water quality standards to EPA, pursuant to Section 303(c) and 40 CFR 131.21, EPA must approve all or part of that proposal within sixty days or disapprove all or part of that proposal within ninety 90 days. Even if EPA disapproves any water quality standard, that standard remains in effect until EPA promulgates a rule superseding that state standard.

EPA understands that the Commonwealth intends the revisions to Chapters 16, 93, and the addition of Chapter 96, to constitute the Commonwealth triennial review of its water quality standards regulation. Section 303(c)(1) of the CWA requires that from time to time, but at least once each three year period, states hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards. Since we are unaware of any previous public participation prior to publication of this proposed rulemaking, EPA expects that the Commonwealth will take into consideration public comment, and make appropriate modifications, before finalizing this rule. EPA is also providing comments on the proposed revisions to Chapter 16. Those comments are being provided to Mr. Edward Brezina, but our specific comments on Chapter 16 are being included as Enclosure 2 for your information. Also, we are including, as Enclosure 3, a copy of the national water quality standards program priorities for FY 1997-1999. The Commonwealth should assure that these goals have been met in this proposal.

For your information, pursuant to Section 7 of the Endangered Species Act, EPA will be consulting with the U.S. Fish and Wildlife Service on EPA's decision regarding modifications to Pennsylvania's NPDES program and water quality standards to ensure the protection and continued existence of threatened and endangered species.

We request that EPA's comments be evaluated, addressed, and appropriate changes made, before these revisions are finalized by Pennsylvania and submitted to EPA for review and

approval. We plan to arrange to meet with PADEP staff to discuss these comments. If you have any questions, please contact me at (215) 814-5717. Thank you again for the opportunity to comment.

Sincerely,

Evelyn S. MacKnight, Chief
PA/DE Branch (3WP11)
Office of Watersheds

cc: Hugh Archer, PADEP
Stuart Gansell, PADEP
Edward Brezina, PADEP
David Densmore, USFWS

Enclosures (3)

ENCLOSURE 1

EPA'S COMMENTS ON PENNSYLVANIA'S PROPOSED REVISIONS TO CHAPTERS 92, 93, 95, 97 AND PROPOSED NEW CHAPTER 96 PUBLISHED IN THE PENNSYLVANIA BULLETIN ON AUGUST 29, 1988.

Chapter 92. NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEMS

General - As stated in the cover letter, these revisions, when adopted, will be subject to EPA's formal approval process as a major modification to the Commonwwealth's NPDES Program. Additional comments may arise during that process as part of the required public participation process and as a result of EPA's consultation with the U. S. Fish and Wildlife Service. These revisions will not become effective in Pennsylvania until they are approved by EPA and, as such, should not be used in the development of NPDES permits until that time.

§ 92.2.(b). Incorporation of Federal regulations by reference.

Incorporating the Federal regulations by reference is commended. We understand that all the regulations listed at 40 CFR 123.25(a) may not be required in Section 92.2.(b) if the Commonwealth decides to impose more stringent requirements or includes the regulatory requirements in the language of the state regulations. However, there are several 40 CFR regulations that need an explanation as to why they were omitted from § 92.2.(b) and/or what proposed state regulation would impose more stringent requirements:

- § 122.7(c) - Information required by NPDES application forms may not be claimed confidential;

- § 122.21(I) - Application requirements for new and existing Combined Animal Feeding Operations (CAFOs) and aquatic animal production facilities (also see comments on § 92.21a. below);

- § 122.21(m)(1) thru (5) - Does this mean that the only variance request Pennsylvania will accept from non-POTWs is for thermal discharges?

- § 122.21(n) - Does this mean that Pennsylvania will not accept any variance requests from POTWs?

- § 122.21(p) - How long will application data be required to be kept? This data is different from the monitoring records required in § 92.41;

- § 124.57(a) - Public notice of CWA Section 316(a) requests must be provided;

- § 124.59 - Comments and conditions requested by other government agencies must be considered during permit development;

• § 124.62 - If Pennsylvania is accepting variance requests, this regulation on the decision of those variances must be incorporated; and

• §§ 125.30 thru 32 - This regulation must be incorporated if Pennsylvania wants to allow a variance from newly promulgated effluent guidelines based on fundamentally different factors.

§ 92.5.a. Confined animal feeding operations [CAFO]

This section needs to be coordinated with the Pennsylvania proposed CAFO Strategy and EPA's previous comments to that Strategy (copy enclosed).

• The use of "animal equivalent units" (AEUs) is not the same as the Federal definition for "animal units" (AUs). We cannot accept the language in § 92.5a. As a basis for when an NPDES permit is required based on the Commonwealth's definition of an animal equivalent unit. Subsections (a)(1) and (b)(1) should use the 40 CFR Part 122, Appendix B, criteria for determining an operation as a CAFO.

• For operations between 301 and 1000 AUs with a potential to discharge, the proposed CAFO strategy requires coverage under a General NPDES Permit. The "NPDES general permit by rule" statement in § 92.5.a.(a) should delete the words "by rule".

§ 92.13. Reissuance of Permits.

The requirement for submitting an application for reissuance of a permit at least 180 days prior to the permit expiration seems to be in conflict with the Commonwealth's Money-Back Guarantee (MBG). For example, a discharger could submit its application 180 days prior to permit expiration but the MBG allows up to 230 days (major renewals) and 290 days (minor renewals) for the Department to issue the permit. If the full MBG timeframe were exercised, permits would expire up to 110 days before the permit is reissued. A more stringent requirement for submitting renewal applications based on the MBG should be considered.

§ 92.21.(a) Applications

The requirement for submitting a permit application for a new discharge at least 180 days before the date in which the discharge will commence also seems to be in conflict with the MBG. A discharger could submit its application 180 days prior to discharging but the MBG allows up to 200 days for the Department to issue the permit. A more stringent requirement for submitting these applications based on the MBG should be considered.

§ 92.21a. Additional application requirements for classes of dischargers

If § 92.2.(b) does not incorporate 40 CFR 122.21(I) by reference, § 92.21a. should have a section which describes or incorporates, at a minimum, the application requirements for new and existing CAFOs and aquatic animal production facilities as found in § 122.21(I).

§ 92.81. GeneraL NPDES permits.

§ 92.81.(a)(5) We have concerns that the general permit language appears to have been modified to generally allow water quality-based effluent limits in general permits that were previously prohibited. EPA's NPDES Permit Writers Manual notes that permitting authorities should consider general permits only where a small percentage of the facilities have the potential for water quality standards violations. Where reasonable potential exists to violate water quality standards, water quality-based and/or technology-based effluent limitations should be placed in an individual NPDES permit.

§ 92.81.(a)(8) We have concerns with regards to allowing a discharger in High Quality waters to be covered under a general permit. If this were allowable, Antidegradation requirements would need to be fully addressed either at the development of the general permit or during the application for coverage of the individual discharger. Addressing Antidegradation during development of the specific general permit would require an analysis demonstrating that ANY discharge covered in the specific category would not cause degradation of the receiving waters below existing quality or that ALL such discharges have met the criteria necessary for degradation of a High Quality water. These criteria include:

- necessary to support important social or economic growth in the area in which the waters are located;
- the State insures that existing uses will be maintained and protected;
- the highest statutory and regulatory requirements shall be achieved for new and existing point sources; and
- all cost-effective and reasonable best management practices shall be in place for nonpoint source controls.

Addressing Antidegradation requirements during the Notice of Intent for coverage period would require a similar analysis as a discharger applying for an individual permit.

In addition, the Federal Antidegradation Policy (40 CFR 131.12) which EPA promulgated for the Commonwealth remains in effect and applies to all waters of the

Commonwealth, whether they are identified in Pennsylvania's Special Protection Waters Program or designated in Chapter 93 as High Quality or Exceptional Value.

§ 92.83.(b)(8) Same comment as for § 92.81.(a)(8).

CHAPTER 93. WATER QUALITY STANDARDS

General Comments:

(1) For many years, the Commonwealth has allowed for "criteria compliance times." EPA believes that the compliance times are essentially mixing zones. EPA defines mixing zones as areas where an effluent discharge undergoes initial dilution.

EPA believes that the Commonwealth should take the RBI as an opportunity to adopt appropriate mixing zone regulations into Chapter 93. Federal regulation at 40 CFR 131.13 indicates that states may, at their discretion, include in their state standards, policies generally affecting their application and implementation, such as mixing zones, low flows and variances. In the preamble to the water quality standards regulation (48FR51400), it is stated that general policies (such as mixing zones) if adopted by a state, are to be included in a state's water quality standards and are subject to EPA review and approval.

(2) The Department mentions in an editor's note that sections 93.4(c) and 93.4(d)(1) and (2) are proposed to be amended and moved to a new §93.4a in proposed regulations published in the Pennsylvania Bulletin on March 22, 1997. We would refer the Department to our comments on this proposal submitted to the Environmental Quality Board on May 19, 1997.

Table 3. Specific Water Quality Criteria

Aluminum

On June 6, 1994, EPA disapproved Pennsylvania's Aluminum criteria found in Table 3. We indicated that in order to remedy this disapproval, the Commonwealth must adopt EPA's recommended acute and chronic aquatic life criteria values of 0.087 mg/L and 0.75 mg/L, respectively. Or, alternately, the Commonwealth could supply supporting information consistent with EPA's guidelines for derivation of criteria that indicates that the existing criterion, as implemented, is scientifically defensible and protective of aquatic life. On September 2, 1994, the Department replied to our disapproval. They indicated that they would propose to adopt EPA's acute aquatic life criterion for aluminum. For the chronic criteria, they expressed their concern with EPA's recommended chronic criterion for aluminum, but committed to continue to pursue development of a scientifically defensible chronic criterion. To that end, they indicated their intent to conduct a thorough review of the appropriate toxicity data and the criteria development procedures with EPA-ORD scientific staff and others, as appropriate.

EPA is pleased to see that the Commonwealth is proposing to adopt EPA's recommended acute aquatic life criteria for aluminum, however, EPA's chronic aquatic life criteria is not proposed for adoption, and Pennsylvania gives no other rationale than to state "because the toxicity data used in its development are ambiguous." The Commonwealth should provide the results of its pursuit of a scientifically defensible chronic criterion. These comments are repeated in EPA's comments to Edward Brezina on the proposed changes to Chapter 16.

Ammonia

Pennsylvania should update its criteria for ammonia based on the 1998 Update of Ambient Water Quality Criteria for Ammonia. This document has been provided to the Department.

Bacteria

Current EPA criteria for protection against pathogenic microorganisms in recreational waters, found in *Ambient Water Quality Criteria for Bacteria - 1986*, rely on the use of E. coli and enterococci as indicators of potential risk from acute gastrointestinal disease. Pennsylvania still relies on the use of fecal coliform. Over the next few years, EPA will be encouraging states to adopt the current recommendation, or a scientifically defensible alternative. Where states fail to adopt the appropriate criteria, EPA will promulgate federal standards. At this point, the Commonwealth may continue to use fecal coliform as an indicator, but in order to be consistent with former EPA guidelines, they the following must be adopted:

"Based on a minimum of not less than five samples taken over a 30-day period, the fecal coliform bacterial level should not exceed a log mean of 200 per 100 ml, nor should more than 10 percent of the total samples taken during any 30 day period exceed 400 per 100 ml.

In addition, Pennsylvania has historically not used bacteria for monitoring for use attainment for the minimum CWA use for swimming for purposes of use attainment in Section 305(b) Reports or for Section 303(d) lists. While we understand that there are resource constraints, swimmer safety is a priority and bacteria assessments should be used to identify risks and require TMDLs to be completed where needed.

Chloride

The Commonwealth should also consider adopting EPA's aquatic life criteria recommendations of 860,000 μg/L for acute exposures, and 230,000 μg/L for chronic exposures.

Dissolved Oxygen

There seems to be discrepancies in PA's dissolved oxygen standard in lakes utilized for trout stocking. The DO standard for cold water fisheries (CWF), high quality warm water fisheries (HQ-WWF) and high quality trout stocking fisheries (HQ-TSF) list the DO standard for lakes as for the epilimnion a minimum daily average of 5.0 mg/l, minimum 4.0 mg/l. This is not mentioned for TSF waters. Since many of the lakes are used for trout stocking, a minimum of 4.0

mg/l will be applied throughout the water column instead of just the epilimnion causes the lake to be listed inappropriately under s.Section 303(d) of the Clean Water Act (CWA). In lakes, the DO standard for TSF should only be applied to the epilimnion.

§93.7(c)

EPA had previously disapproved Pennsylvania's regulation at 25 PA Code 93.5(c) (ambient concentrations). This new provision does address some of EPA's concerns, however, the changes will not fully satisfy our disapproval.

Since our disapproval, EPA has issued national guidance for establishing site-specific aquatic life criteria equal to natural background. In a memo from the Director of the Office of Science and Technology dated November 5, 1997, EPA laid out the requirements a state needs to satisfy in order to establish site specific aquatic life criteria equal to natural background. Based on our review of this guidance and the Commonwealth's proposed regulation, the Department has established an adequate definition of natural background, a provision in water quality standards that site specific criteria may be set equal to natural background, and provides for public notice and comment on the site specific numeric criteria derived from this provision. This section lacks a procedure for determining natural background, or alternatively, a reference to another document describing a binding procedure that will be used. This procedure needs to be specific enough to establish natural background concentrations accurately and reproducibly. If the Department chooses to go with the binding procedure, that procedure must be made available for public notice and comment.

The Commonwealth's natural quality provision must not apply to human health uses. As stated in EPA guidance, where the natural background concentration exceeds an established human health criteria, this information should be used, at a minimum, to re-evaluate the human health use designation. Where the natural background concentration does not support a human health use, it may be prudent for the Commonwealth to change the human health use to one the natural background will support.

These comments are repeated in EPA's comments to Edward Brezina on the proposed changes to Chapter 16.

§93.8(e) Development of site-spedific water quality criteria for the protection of aquatic life

This section indicates that water quality criteria for toxics shall be applied in accordance with Chapter 96. Chapter 96 indicates that acute aquatic life criteria is applied at 7Q10 and threshold human health criteria is applied at 7Q10. This is incorrect. It is EPA's position that acute criteria is applied at 1Q10, and non-carcinogens are applied at 30Q5. This recommendation has been reinforced whenever EPA has promulgated criteria [see 40 CFR 131.36(c)(2)(ii)].

§93.9 Designated water uses and water quality criteria

The Commonwealth is proposing to downgrade the current practice of protecting all waters of the Commonwealth for drinking water purposes. The CWA at Section 101(a) does not require that all waters of the United States be protected as public water supplies. As such, EPA would not formally object to narrowing the scope of streams protected for drinking water purposes. However, the "swimmable" use, including primary contact recreation where water ingestion is likely must be protected for all waters unless it is demonstrated that the swimming use is not attainable on a stream segment-by-segment basis. In all cases where the public water supply use is removed, the Department must also , at a minimum, supply an analysis to support that the fishable/swimmable uses will not be adversely impacted in the waterbody and that all downstream uses will be protected fully. Also, the public water supply use can not be removed if it qualifies as an existing use. Any analysis should include that information as well. Without this analysis, EPA would be unable to approve the deletion of the public water supply use from the streams in question.

Chapter 95. Wastewater Treatment

We request that you clarify whether § 95.4 (Extensions of time to achieve water quality based effluent limitations) and § 95.5 (Treatment requirements for discharges to waters affected by AMD) will remain intact There is no mention of modification or deletion of these sections except on page 4494 of the August 29, 1998, PA Bulletin which states "§§ 95.2–95.9. (Reserved)." and "The Department is proposing to delete §§ 95.2–95.9 as they currently appear in the *Pennsylvania Code* ...".

We request that you clarify where in the state regulations are variances from water quality standards addressed and also whether Commonwealth will allow such a variance?

Chapter 96. WATER QUALITY STANDARDS IMPLEMENTATION

§96.1 Definitions

LA (Load allocation) - The proposed definition is not consistent with the Federal definition of LA at 40 CFR 130.2 (g). Federal regulations, policy or guidance does not provide for a narrative description of any load allocation. A load allocation must be quantifiable and expressed in terms consistent with the federal definition of a load allocation 40 CFR 130.2(g). This Federal definition consistently refers to loads: receiving water's **loading** capacity, best estimates of **loading**, techniques for predicting the **loading**, etc A narrative description of a load allocation is not an appropriate measure. The definition at 96.1 should reflect the Federal definition and delete the narrative description as an acceptable means of defining a LA. The definition for a load allocation should refer to "an existing and future nonpoint source" not source**[s]** since the definition is for a single load allocation.

WLA (Wasteload allocation) - The definition for a wasteload allocation should refer to "an existing or future point source" not source**[s]** since the definition is for a single wasteload

allocation.

TMDL (Total Maximum Daily Load) - We suggest that this definition include a discussion of the terms in which a TMDL can be expressed, consistent with the Federal regulations: "A TMDL can be expressed in terms of mass per time, toxicity or other appropriate measures."

§96.3 Water quality protection levels

Throughout this section, Pennsylvania indicates that criteria will be achieved at least 99% of the time. Pennsylvania must demonstrate that the use of "99% of the time" will be as protective as the frequency and duration specified for EPA's acute and chronic criteria. Also, 99% is not valid for the Commonwealth's general water quality criteria. Narrative water quality standards must apply at all times.

§96.3(b)

This language is unacceptable. The Antidegradation requirements in Chapters 93, 95 and 105 must apply to all tiers of Antidegradation protection, that includes existing uses as well as high quality and exceptional value waters.

§96.3(e)

Please refer to EPA's comments on §93.7(c) earlier in this enclosure.

§96.3(f)

The Commonwealth needs to clarify in this section that the estimated stream flow includes discharges into the stream. In other words, if the zero flow condition in the stream can be compensated for by the discharge of sufficient volume from effluent discharges, EPA would require that the uses be protected. Also, the Commonwealth's general water quality criteria would apply at all times. This section should be modified to indicate that the applicable NUMERIC water quality criteria is what will be achieved at the first downstream point where uses are supported. Narrative criteria must apply at all times.

§96.3(g)

The Commonwealth includes wetlands in its definition of "Surface Waters" in Chapter 93. Therefore, this section should indicate that the functions and values of wetlands shall be protected under Chapters 93 AND 105.

§96.4 Total Maximum Daily Loads (TMDLS)

We suggest that this entire section be more clearly written so that the factors and consideration for nonpoint source impacts (and the need to develop TMDLS for waters that are mainly impacted by nonpoint sources) are treated equally with the point source discussion. Nonpoint

sources (NPS) are the predominant cause for nonattainment as listed in Pennsylvania's Section 303(d) list and, as such, will drive most of the TMDLs calculated in the future. As written, the proposed TMDL regulation is inconsistent with EPA regulations regarding the considerations and treatment of nonpoint source impacts.

§96.4 (a) - Is this the only subsection that apply to nonpoint source impacted waters? We recommend adding more discussion of nonpoint source impacts.

§96.4 (b) - - Does this only apply to waters that are mainly impacted by point sources? While subsection (b) directly discusses point source impacts, nonpoint source impacted waters are not discussed except through some muffled references. Please add an NPS discussion.

§96.4 (c) - Please address the factors related directly to nonpoint sources, such as flow variations as it relates to wet weather conditions by adding appropriate language.

§96.4 (d) - This section discusses only WLAs and how they will be implemented and does not address how the LAs will be considered. Where appropriate, LAs may also affect the determination of water quality- based effluent lifts (WQBELs). Please add the LA discussion.

§96.4 (e) - This does not include in (1) the flow variation due to wet weather conditions or other variations associated with nonpoint source loadings.

§96.4 (f) - This relates only to point source controls, such as (1) the authorized discharge under applicable technology-based requirements (there are no authorized technology-based requirements for nonpoint sources - if there are then the state should refer to the regulatory reference). Nutrient loading refers to 96.5 which is point source oriented (96.5(a) refers to land disposal of wastewater and 96.5(c) refers to discharges from point sources). Please add a discussion of LA procedures.

§96.4 (g) - Another requirement should be added for considering effluent trading: a TMDL exists for the water body (including relevant Las).

§96.4 (h) - This refers to the modeling considerations for those waters impacted by point sources only and does not address the design considerations in any table for wet weather considerations (as table 1 does for point source low flow impacts) nor the modeling considerations for nonpoint source impacted waters. Please add additional discussion and/or tables to address the modeling considerations and assumptions for Las. Also, the discussion on how a LA portion of the TMDL can be allotted must be consistent with Federal regulations at 40 CFR 130.2(g) which state that LAs are best estimates of the loading, which range from reasonably accurate estimates to gross allotments, depending on the availability of data and the appropriate techniques for predicting the loading. EPA requires the nonpoint source allocations to be as specific as possible, i.e., if estimates are available on land use runoff coefficients, these estimates should be used to allocate to specific land uses within the watershed. Gross allotments can also be made to land use types. Unless data does not exist to support individual allocation to categories or sources of nonpoint

source loadings, EPA will not accept LAS that are merely a number assigned to all of the nonpoint sources. Also, whenever possible, natural and nonpoint sources must be distinguished.

Chapter 97. Industrial Wastes

Our review of the Proposed Rulemaking deals with the deletion of the provisions of Chapter 97; specifically the pretreatment of industrial wastes. The troubling statement appears on page 4445 of the Pennsylvania Bulletin, which states:

"The Department has not received delegation from the EPA to administer an industrial waste pretreatment program and does not intend to seek delegation to administer this program."
The problem is that a State cannot "*not intend to seek*" a program; this is grounds for withdrawal of the entire NPDES program, as stipulated in 40 CFR §403.10© of the General Pretreatment Regulations which references 402(c)(3) under the Clean Water Act.

ENCLOSURE 2

Comments on Chapter 16

§16.21

The Department has added language to this section that indicates that the frequency of occurrence is accounted for through the specification of water quality protection levels or a design stream flow condition. We believe that the or may be an error, otherwise the Department should indicate how water quality protection levels are equal to design flows.

§16.22(3)

The Department's use of the term "guidance values" is confusing. While we do not disagree with the decision to remove these numbers from the criteria chart, but we are curious as to what happens if WET tests are failed, and the toxic identification evaluation reveals that the parameter of concern is supported only by a guidance value. Also, this section indicates that exceedances of a guidance value may trigger the use of WET tests. If the exceedance itself does not trigger the use of WET tests, please describe other factors that are considered.

§16.24(d)(e) & (g)

The Department should formalize the process by which site-specific criteria derived by Water-Effect Ratios (WERs) are established. In the February 22, 1994 EPA guidance memo from the Director of the Office of Science and Technology, EPA stated that there are two options by which the review of a WER can be accomplished. One was that a state may derive and submit each individual WER determination to EPA for review and approval. This would be accomplished through the normal review and revision process used by a state.

The other option stated the following:

> "A State can amend its water quality standards to provide a formal procedure which includes derivation of water-effect ratios, appropriate definition of sites, and enforceable monitoring provisions to assure that designated used are protected. Both this procedure and the resulting criteria would be subject to full public participation requirements. Public review of a site-specific criterion could be accomplished in conjunction with the public review required for permit issuance. EPA would review and approve/disapprove this protocol as a revised standard once. For public information, we recommend that once a year the State publish a list of site-specific criteria."

In order to meet the requirements of the second option, the Department should include in Chapter 16 the procedure for deriving WERs (this could be a reference to the EPA guidance or some other process approved for use by the Commonwealth), the appropriate definition of sites and enforceable monitoring provisions. Chapter 16 should also detail the Commonwealth's process

for public participation in the adoption of the WER (this should be in the regulation, even if the Commonwealth prefers to stay with the first option). Finally, the policy should state where the public can find the list of site-specific criteria that the state has approved.

§16.32(c)

The Department deletes the provision that allows criterion to be established based on taste and odor. While we do not disagree with this decision, in the rationale document it is stated that if a problem involving taste and odor arises, the general narrative criteria in §93.6 can be used to address it. What values will be used should the Department find the narrative needs to be invoked?

§16.32(c)(2)

The Department should add language to the first sentence of this section so that it reads, "If the EPA criteria have been evaluated, and have been determined to be inadequate to protect designated uses, or when no criteria have been developed for a substance identified, OR LIKELY TO OCCUR in a discharge...." to encompass those parameters with impacts lower than the detection levels.

§16.32(d)(3)

The Department should add to this section language that indicates that other Federally published criteria (not just those found in the National Toxic Rule) will also be considered as a source to obtain relevant risk assessment values for protection of threshold level toxic effects to human health.

§16.33

We support the Department's decision to delete the extraneous discussion. However, is the basis for the Department's risk management decisions found elsewhere in regulation?

§16.33(f)(2)

The Department should add language to this section so that it reads, "For toxics for which (cancer potency) slope factors have been developed as evidenced by listing on IRIS, the Department will either use the EPA developed criteria OR METHODOLOGIES, or will develop..."

§16.51(A)

This subsection indicates that the criteria listed in Table 1 is used in the development of TMDLs and NPDES permit limits. It should also include a statement that indicates that these criteria must be used for the purposes of 305(b) and 303(d) assessments.

Also in this subsection, it is stated: "The human health criteria, which include exposure from drinking water and fish consumption, are further defined as to the specific effect (that is cancer or health). The "or health" seems rather vague, perhaps it would be better to include some examples of threshold effects.

§16.51(B)

EPA had previously disapproved Pennsylvania's regulation at 25 PA Code 93.5(c) (ambient concentrations). This new provision does address some of EPA's concerns, however, the changes will not fully satisfy our disapproval.

Since our disapproval, EPA has issued national guidance for establishing site specific aquatic life criteria equal to natural background. In a memo from the Director of the Office of Science and Technology dated November 5, 1997, EPA laid out the requirements a state needs to satisfy in order to establish site specific aquatic life criteria equal to natural background. Based on our review of this guidance and the Commonwealth's proposed regulation, the Department has established an adequate definition of natural background, a provision in water quality standards that site specific criteria may be set equal to natural background, and provides for public notice and comment on the site specific numeric criteria derived from this provision. This section lacks a procedure for determining natural background, or alternatively, a reference to another document describing a binding procedure that will be used. This procedure needs to be specific enough to establish natural background concentrations accurately and reproducibly. If the Department chooses to go with the binding procedure, that procedure must be made available for public notice and comment.

The Commonwealth's natural quality provision must not apply to human health uses. As stated in EPA guidance, where the natural background concentration exceeds an established human health criteria, this information should be used, at a minimum, to re-evaluate the human health use designation. Where the natural background concentration does not support a human health use, it may be prudent for the Commonwealth to change the human health use to one the natural background will support.

This comment is also included in comments on revisions to Chapter 93. These comments were submitted directly to the Environmental Quality Board.

§16.102(a)(3)(ii)

The Department should delete "generally" from this section.

Appendix A, Table 1

Aluminum

On June 6, 1994, EPA disapproved Pennsylvania's Aluminum criteria found in Table 3. We indicated that in order to remedy this disapproval, the Commonwealth must adopt EPA's

recommended acute and chronic aquatic life criteria values of 0.087 mg/L and 0.75 mg/L, respectively. Or, alternately, the Commonwealth could supply supporting information consistent with EPA's guidelines for derivation of criteria that indicates that the existing criterion, as implemented, is scientifically defensible and protective of aquatic life. On September 2, 1994, the Department replied to our disapproval. They indicated that they would propose to adopt EPA's acute aquatic life criterion for aluminum. For the chronic criteria, they expressed their concern with EPA's recommended chronic criterion for aluminum, but committed to continue to pursue development of a scientifically defensible chronic criterion. To that end, they indicated their intent to conduct a thorough review of the appropriate toxicity data and the criteria development procedures with EPA-ORD scientific staff and others, as appropriate.

EPA is pleased to see that the Commonwealth is proposing to adopt EPA's recommended acute aquatic life criteria for aluminum, however, EPA's chronic aquatic life criteria is not proposed for adoption, and Pennsylvania gives no other rationale than to state "because the toxicity data used in its development are ambiguous." The Commonwealth should provide the results of its pursuit of a scientifically defensible chronic criterion.

This comment is also included in comments on revisions to Chapter 93. These comments were submitted directly to the Environmental Quality Board.

Other Specific Criteria

The following criteria are not as stringent as EPA's 304(a) recommendations. There are also some Pennsylvania criteria that are more stringent than EPA values, we can discuss these numbers. All values are expressed as μg/L:

Parameter	PA CMC*	EPA CMC*	PA CCC*	EPA CMC*	PA HH*	EPA HH*
Arsenic	360	340 [1]	190	150 [1]		
Chromium III	N/A	570 [1,2]	N/A	74 [1,2]		
Copper	17 [3]	13 [1,3]	11 [3]	9 [1,3]	N/A	1300
Mercury	2.1	1.4 [1]			0.14	0.050 [4]
Nickel	1400 [5]	470 [1,5]	160 [5]	52 [1,5]		
Selenium					N/A	170
Zinc					N/A	9100
Pentachloro-phenol	20 [6]	19 [1,6]				
1,2-Dichloro-propane					N/A	0.52 [7]

1,3-Dichloro-benzene					3000 [7]	400
1,4-Dichloro-benzene					3000 [7]	400
Isophorone					700	36
gamma-BHC (Lindane)	2	.95 [1]				
Dieldrin	2.5	0.24 [1]				
Endosulfan sulfate					N/A	110 [4]
Endrin	0.18	0.086 [1]				
Endrin Aldehyde					N/A	0.76 [4]
Heptachlor Epoxide			0.1	0.0038		

* CMC = Criteria Maximum Concentration
CCC = Criteria Continuous Concentration
HH = Human Health

1 This recommended criteria is based on a 304(a) aquatic life criteria that was issued in the *1995 Updates: Water Quality Criteria Documents for the Protection of Aquatic Life in Ambient Water*, (EPA-820-B-96-011, September 1996). This value was derived using the GLI Guidelines (60FR15393-15399, March 23, 1995; 40 CFR 132 Appendix A); the difference between the 1985 Guidelines and the GLI Guidelines are explained on page iv of the 1995 Updates. None of the decisions concerning the derivation of this criterion were affected by any considerations that are specific to the Great Lakes.

2 The freshwater criterion for chromium III is expressed as a function of hardness (mg/L) in the water column. The value given here corresponds to a hardness of 100 mg/L. It was calculated from the following:

EPA CMC (dissolved) = 0.316 x Exp(0.8190 x ln[H] + 3.7256)
EPA CCC (dissolved) = 0.860 x Exp(0.8190 x ln[H] + 0.6848}

3 The freshwater criterion for copper is expressed as a function of hardness (mg/L) in the water column. The value given here corresponds to a hardness of 100 mg/L. It was calculated from the following:

PA CMC (dissolved) = 0.960 x Exp(0.9422 x ln[H] - 1.464)

EPA CMC (dissolved) = 0.960 x Exp(0.9422 x ln[H] - 1.700)
PA CCC (dissolved) = 0.960 x Exp(0.854 x ln[H]-1.465)
EPA CCC (dissolved) = 0.960 x Exp(0.8545 x ln[H] - 1.702)

4 This criteria has been revised to reflect the EPA q1* or RfD, as contained in the Integrated Risk Information System (IRIS) as of April 8, 1998. The fish tissue bioconcentration factor (BCF) from the 1980 Ambient Water Quality Criteria document was retained in each case.

5 The freshwater criterion for nickel is expressed as a function of hardness (mg/L) in the water column. The value given here corresponds to a hardness of 100 mg/L. It was calculated from the following:

PA CMC (dissolved) = 0.997 x Exp(0.846 x ln[H}+1.1645)
EPA CMC (dissolved) = 0.998 x Exp(0.8460 x ln[H] + 2.255)
PA CCC (dissolved) = 0.998 x Exp(0.846 x ln[H}+3.3612)
EPA CCC (dissolved) = 0.997 x Exp{0.8460 x ln[H] + 0.0584)

6 Freshwater aquatic life values for pentachlorophenol are express as a function of pH. Value displayed in this chart correspond to a pH of 7.8. It was calculated from the following:

PA CMC = Exp(1.005[pH]-4.830)
EPA CMC = exp(1.005(pH)-4.869)

7 ...for dichlorobenzene

The following human health criteria are also less stringent than EPA's recommendation. This may be due to an error in the Department's rounding. We would like to discuss this further. These criteria are:

Thallium
Pentachlorophenol
Acrylonitrile
Carbon tetrachloride
Chlorobenzene
Chloroform
Dichlorobromomethane
1,2-Dichloroethane
1,1-Dichloroethylene
Methyl bromide
Methylene chloride
1,1,2,2-Tetrachloroethane
Toluene
Trichloroethylene

Anthracene
Bis(2-ethylhexyl)phthalate
2-Chloronaphthalene
1,2-Dichlorobenzene
Di-n-butyl phthalate
Hexachlorobutadiene
Hexachloroethane
Nitrobenzene
N-Nitrosodimethylamine
Pyrene
1,2,4-Trichlorobenzene
alpha-BHC
gamma-BHC
4,4'-DDT
4,4'-DDE
Endrin

Table 3

From our attendance at the public meeting, it is EPA's understanding that the units assigned to the detection limits (mg/L) in the table were, in fact, an error, and that this will be corrected in the final rulemaking. Also, the detection level for chrysene using method 625 is listed as 5.3 μg/l, where it is actually 2.5 μg/l .

ENCLOSURE 3

FY 1998 - 1999
WATER QUALITY STANDARDS PROGRAM PRIORITIES

- States, Tribes, and Regional Offices should resolve all currently outstanding EPA disapproval actions, targeting those posing the greatest legal vulnerability or risk to human health or to the environment. When a State or Tribal disapproval can not be resolved within the triennium, the State or Tribal and Regional Office should develop and agree upon an action plan to collect the data, conduct the analyses, etc. needed to resolve the disapproval action.

- States and Tribes should adopt or identify acceptable procedures to implement their antidegradation and mixing zone policies, and their narrative water quality and sediment quality criteria for toxic pollutants.

- States and Tribes should review, and, if necessary, revise their water quality standards to include the protection of threatened or endangered species, identified under the Federal Endangered Species Act (ESA), as part of use designations, criteria, antidegradation policy and implementation procedures, mixing zones policies and implementation procedures adopted to support or implement State or Tribal water quality standards.

- States and Tribes should initiate and continue to expand development of scientifically defensible biologically-based use classification and assessment systems.

- States and Tribes should identify how they will routinely use water quality standards in managing their water improvement programs on a watershed basis. Greater recognition of water quality standards as the goals for the watershed may require and, if appropriate, revision of State and Tribal water quality standards. Such revisions may include more precisely defined, biologically-based, aquatic life uses, as well as more precisely defined recreational uses. More precisely defined uses enhance public understanding of the basis for the uses adopted into State and Tribal water quality standards serving as the goals for the watershed and provide a stronger scientific basis on which to select the most cost-effective management controls.